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### A Text Mining Model for Studying Minority Entrepreneurship

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# A Text Mining Model for Studying Minority Entrepreneurship

TREO Talk Paper

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## Abstract

Minority sub-cultures have a strong influence on the intention, value, business conduct and decision making by entrepreneurs. In the past, studies of entrepreneurs and their characteristics concentrated on individuals from the same cultural background (Cohen et al. 2019). Little emphasis was given to the study of entrepreneurs who are minorities and share different values and ideas from those who belong to the mainstream culture. There is a growing focus on the study of minority entrepreneurs in recent business entrepreneurship research due to the important role of these entrepreneurs in developing small businesses and driving economic growth. However, most of these studies have very limited scope because they focus on a specific minority group in a very specific sector. These studies also rely on traditional survey instruments which may cause sampling bias, survey design bias and inefficiencies in analyzing the data.

In this paper, we propose a text mining framework to identify the characteristics of minority entrepreneurs from unstructured text and multimedia contents. In this study, we analyze the characteristics of minority entrepreneurs from the African American, Hispanic, and Asian communities using text mining analysis. Our study consists of three major phases. First, we collect the success stories, business case studies materials about these entrepreneurs, media comments, and speeches given by these entrepreneurs. For videos of the entrepreneurs, we will use their transcripts for text mining analysis. In the second step, we will use relation extraction and sentiment analysis to extract the keywords and phrases representative of entrepreneur characteristics. For relation extraction, we extract the keywords which are in direct and indirect verbal relations with the names of the major entrepreneur characteristics factors proposed by previous literatures (Makhbul and Hasun 2011). For sentiment analysis-based extraction, we extract nouns and noun phrases which are mentioned in sentences with either positive or negative sentiments. This is because that the entrepreneur characteristics keywords are more likely to get mentioned in sentences with strong sentiments. In the third step, we cluster the extracted keywords to existing entrepreneur characteristics factors and construct new factors based on the extractions results according to the keywords co-occurrences and semantic similarity between keywords. The output from our model can be used to study differences in the characteristics between entrepreneurs of mainstream culture and minority groups and between the minority entrepreneurs of different cultures. Our study contributes to the body of knowledge of data analytics in entrepreneurship studies by showing how text mining techniques can be used to study minority entrepreneurs from unstructured data. This research has three major implications. One of the implications is to provide a better understanding of the characteristics of minority entrepreneurs and their impact on success. The second implication is to help entrepreneurship educators design educational programs and curricula that address the specific needs of minority entrepreneurs. The third implication is that entrepreneurship research can significantly benefit from the use of text mining tools and techniques.

## References

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